

**METHOD AND SYSTEM FOR SUPPORTING SOFTWARE PIPELINING USING A SHIFTING REGISTER QUEUE**

**ABSTRACT OF THE DISCLOSURE**

5       A system for supporting software pipelining using a shifting register queue is provided. The system includes a register file that comprises a plurality of registers. The register file is operable to receive a shift mask signal and a shift signal and to identify a shifting register queue within  
10      the register file based on the shift mask signal. The shifting register queue comprises a plurality of queue registers. The register file is further operable to shift the contents of the queue registers based on the shift signal.